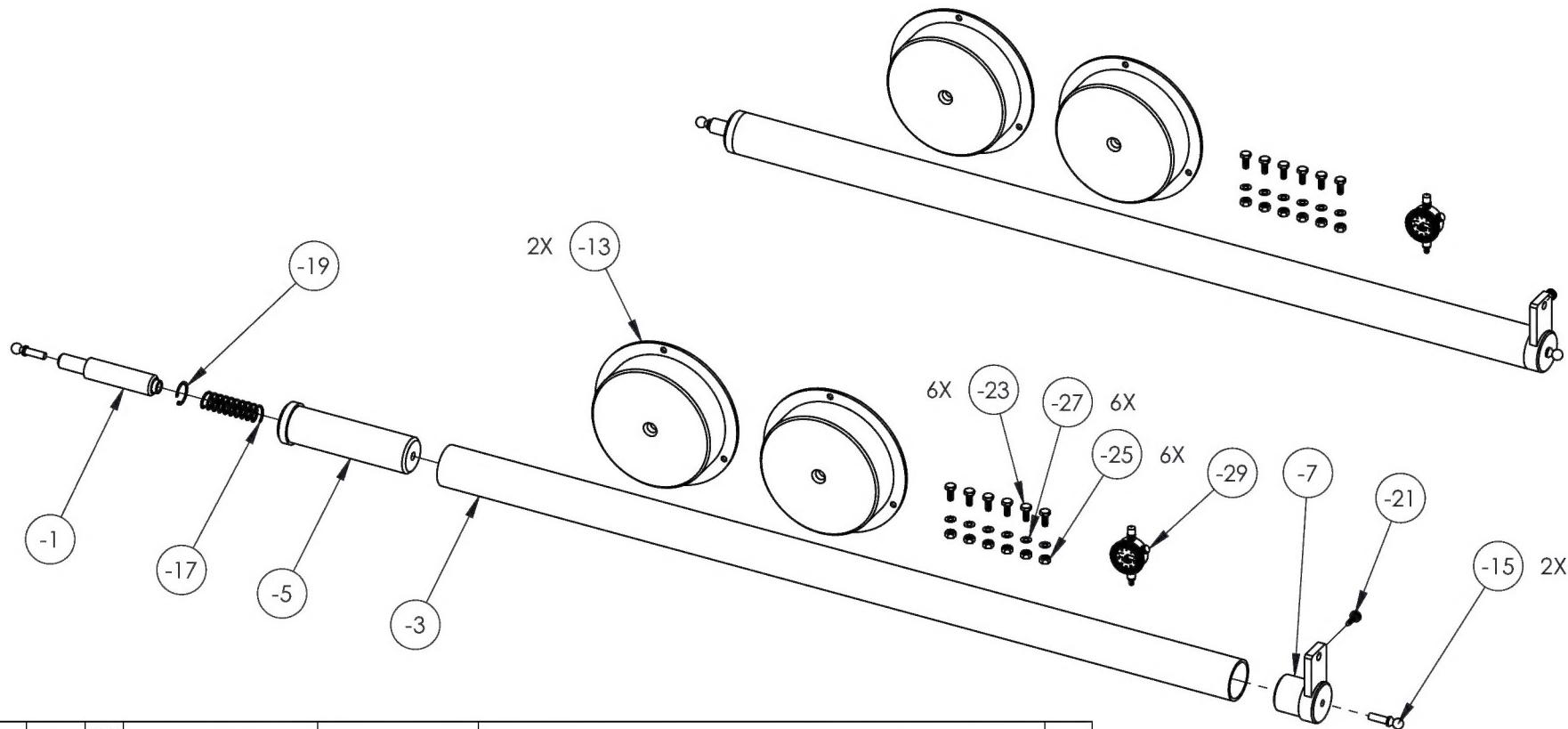


This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1	14-0233	UPDATED TO NEW DRAFTING STANDARDS. -1 CH'D MAT'L WAS 4140 IS 4140 Q&T/4142 Q&T. REMOVED HEAT TREAT. -3 CH'D FINISH WAS ANODIZE GREY IS CLEAR ANODIZE. DELETED ENGRAVE NOTE. -5 & -9 CH'D DIM WAS LIMITS Ø1.7618-1.7624 IS LIMITS Ø1.7610-1.7615.	1/7/2015	DPD	JAG



ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
		-1	1	PLUNGER	4140 Q&T/4142 Q&T		2
		-3	1	TUBE	6061		3
		-5	1	INSERT	1018		4
X		-7	1	WELDMENT			5
1		-9		INSERT 2	1018		6
1		-11		PLATE	1018		7
		-13	2	ADAPTER	4140/4142		8
B/O	-15	2	CONSTRUCTION BALL	STEEL	Ø1/2 X .94, 6-32 X 5/16 (CARR LANE #CL-5-SCB)		1
B/O	-17	1	SPRING	STEEL	Ø.688 I.D. X .850 O.D. X Ø.081 WIRE X 2.75, 15 LBS/IN (CENTURY SPRING #72243)		1
B/O	-19	1	INTERNAL RETAINING RING	STEEL	Ø1 BORE X .042 (MCMASTER-CARR #98409A211)		1
B/O	-21	1	THUMB SCREW	S.S.	10-32 X 3/4 (CARR LANE #CL-23207)		1
B/O	-23	6	BOLT	STEEL	1/4-28 AN4-5		1
B/O	-25	6	NUT	STEEL	1/4-28 MS35650-3252		1
B/O	-27	6	WASHER	STEEL	1/4 AN960-416		1
B/O	-29	1	DIAL INDICATOR		STARRETT AMI-81-231J-W/FBP		1
ASSY							
-7							

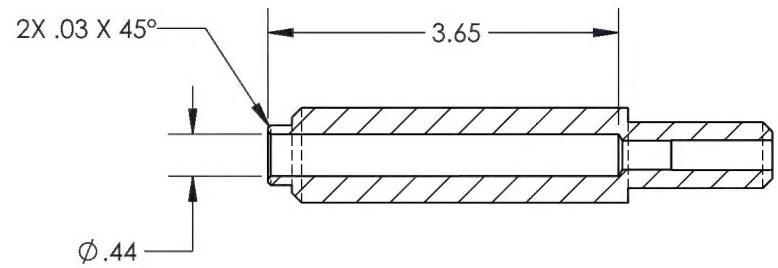
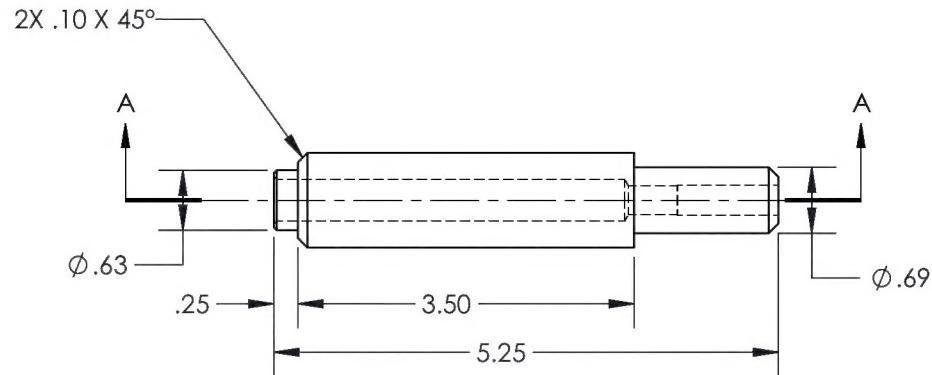
**DART**  
AEROSPACE

TITLE  
**D/S ALIGNMENT TOOL**

DWG NO.	REV
RB T101743-125	1
MAT'L	DRAWN BY: GILBERT
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1	APPROVED <i>D Weil</i>
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL BELL 412HP
SCALE 1:8	DATE 7/18/2012
	SHEET 1 OF 8

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

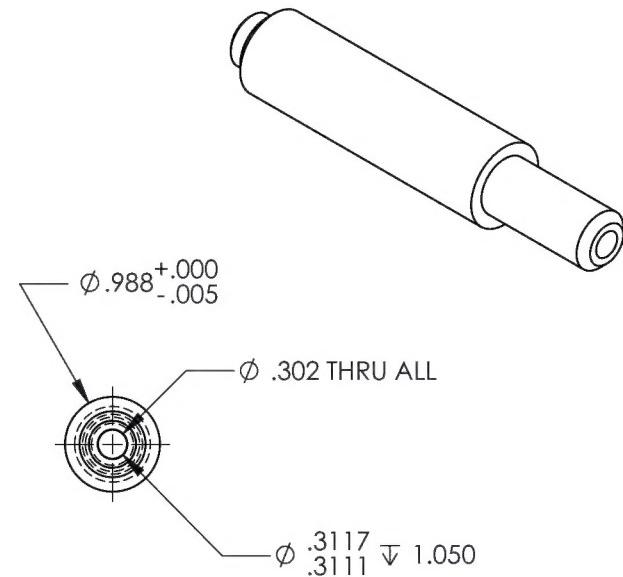
REVISIONS					
REV	ECR		DESCRIPTION	DATE	INITIAL
1	14-0233	-1	CH'D MAT'L WAS 4140 IS 4140 Q&T/4142 Q&T. REMOVED HEAT TREAT.	1/7/2015	DPD JAG



SECTION A-A

(-1)

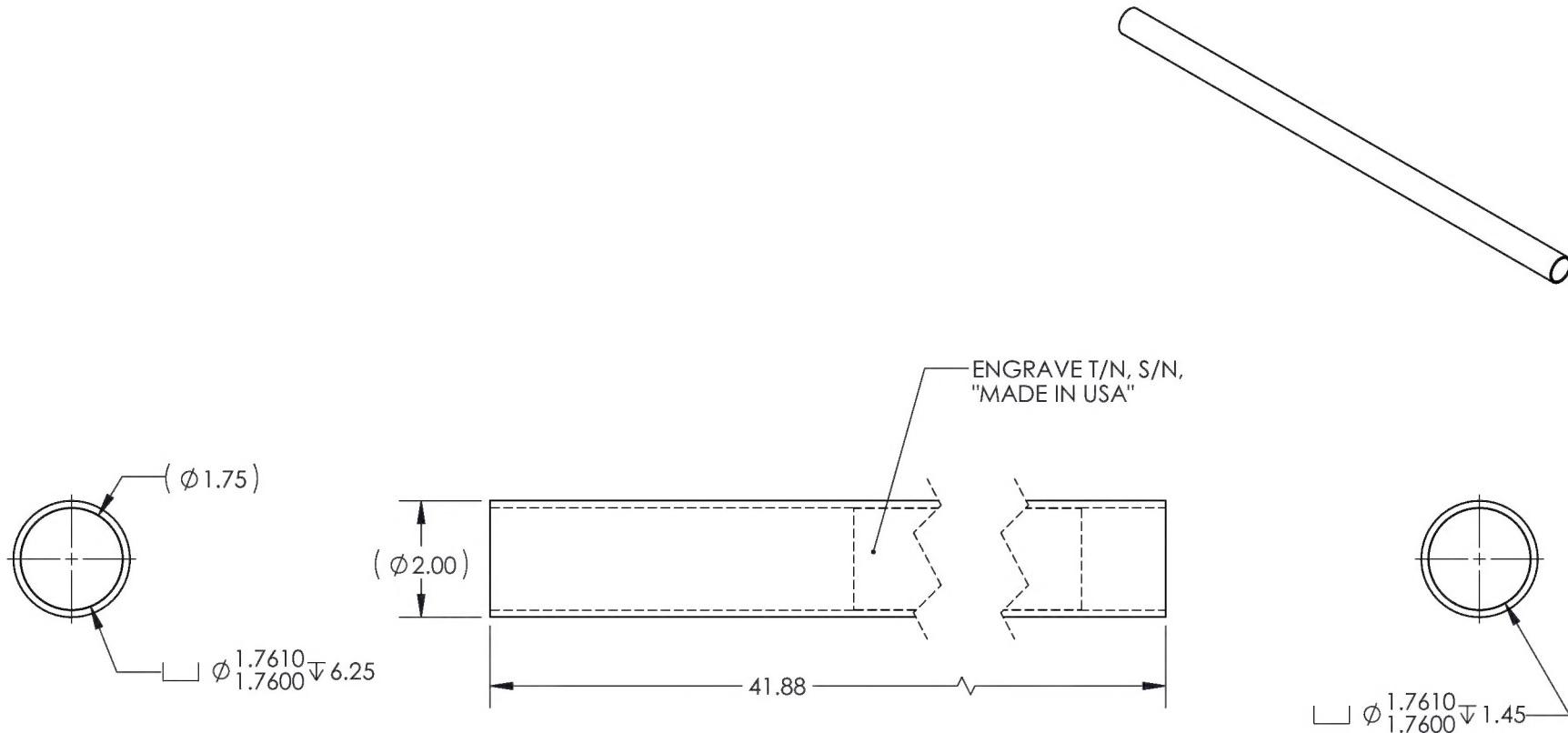
PLUNGER



<b>DART</b> AEROSPACE	
TITLE	
DWG NO. RB T101743-125-1	
REV 1	
MATERIAL 4140 Q&T/4142 Q&T	
DRAWN BY: GILBERT	
APPROVED D Weil	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
.X ± .1	
HEAT TREAT CAD PLATE YELLOW	
SPEC QQ-P-416F, TYPE II, CLASS II	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
USED ON MODEL BELL 412HP	
SCALE 1:2	DATE 7/18/2012
SHEET 2 OF 8	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1	14-0233	-3 CH'D FINISH WAS ANODIZE GREY IS CLEAR ANODIZE. DELETED ENGRAVE NOTE.	1/7/2015	DPD	JAG



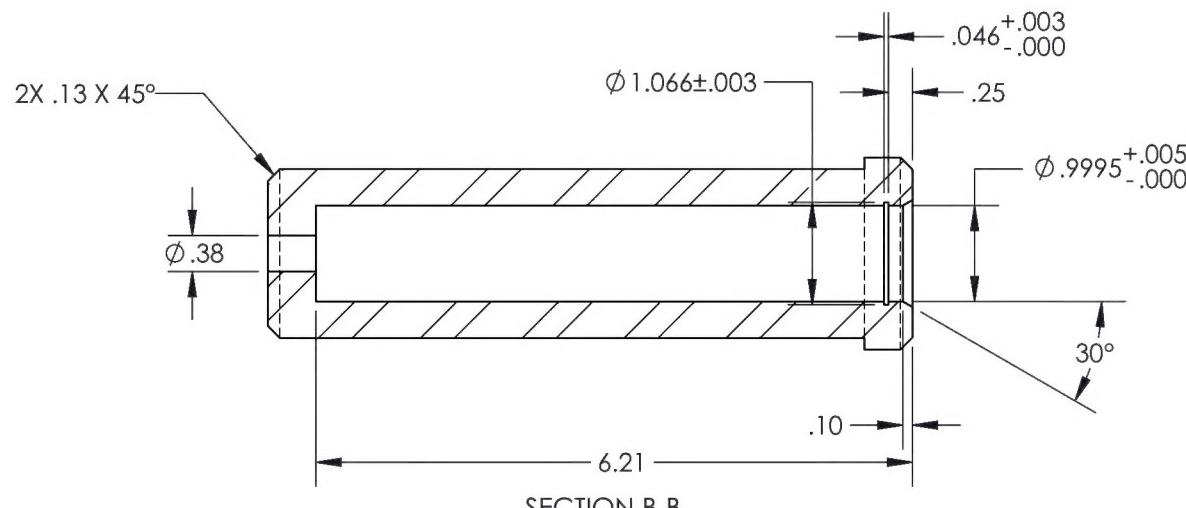
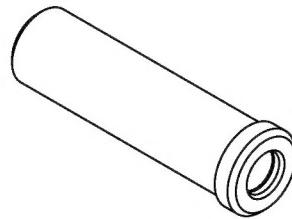
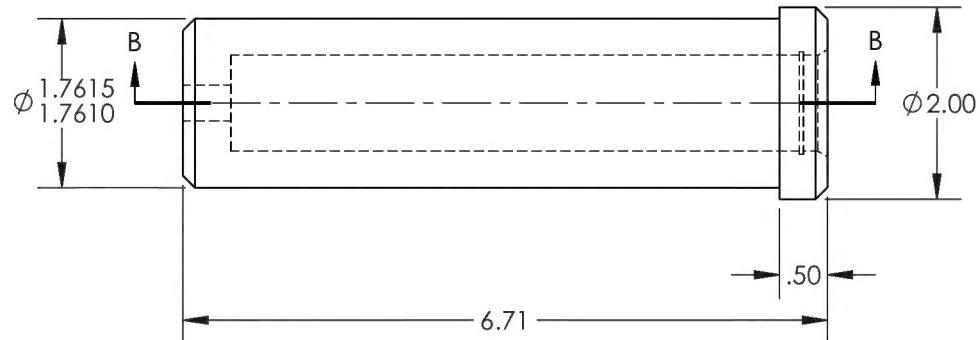
(3)

TUBE

<b>DART</b> AEROSPACE	
TITLE	
DWG NO. RB T101743-125-3	
MAT'L 6061	DRAWN BY: GILBERT
APPROVED D Weil	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005	FRACTIONS ± 1/8
.XX ± .01	ANGLES ± 5°
X ± .1	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SPEC MIL-A-8625F, TYPE II, CLASS II	USED ON MODEL
BELL 412HP	
SCALE 1:3	DATE 7/18/2012
SHEET 3 OF 8	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVIEWS		
REV	ECR	DESCRIPTION
1	14-0233	-5 CH'D DIM WAS LIMITS Ø1.7618-1.7624 IS LIMITS Ø1.7610-1.7615.



SECTION B-B

(-5)

INSERT

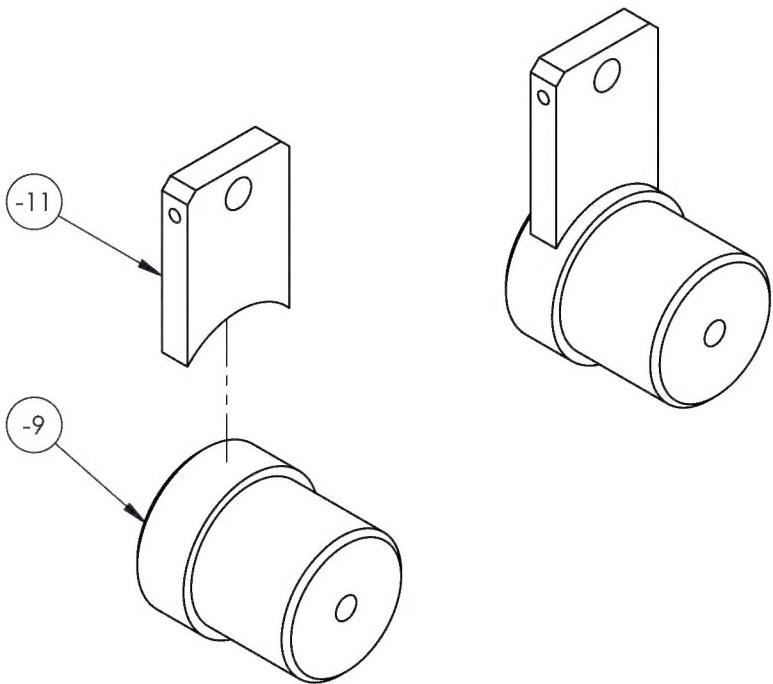
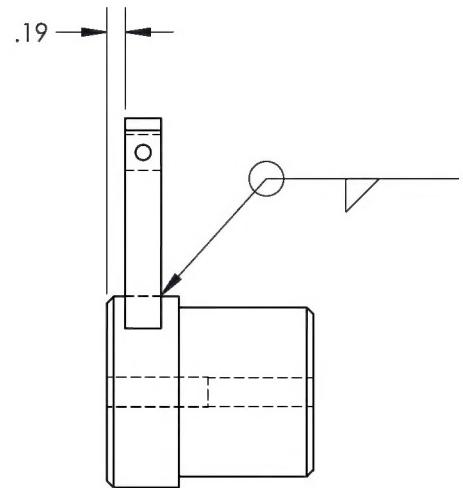
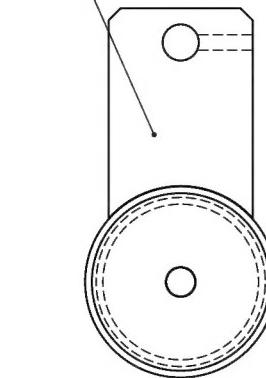
<b>DART</b> AEROSPACE	
TITLE	
DWG NO. RB T101743-125-5	
MAT'L 1018	DRAWN BY: GILBERT
UNLESS OTHERWISE SPECIFIED APPROVED <i>D Weil</i>	
DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
X ± .1	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SPEC QQ-P-416F, TYPE II, CLASS II	
HEAT TREAT FINISH CAD PLATE YELLOW	
USED ON MODEL BELL 412HP	
SCALE 1:2	DATE 7/18/2012
SHEET 4 OF 8	

REV  
**1**

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
-----	-----	-------------	------	---------	----------

ENGRAVE "RB T101743-107  
RB T101743-101  
OR  
RB T101743-125  
TOOL SET"



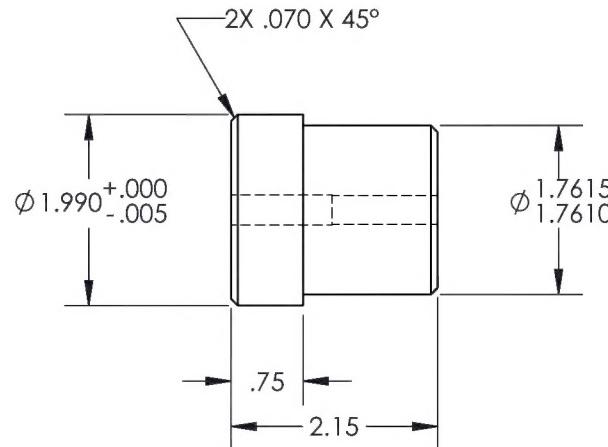
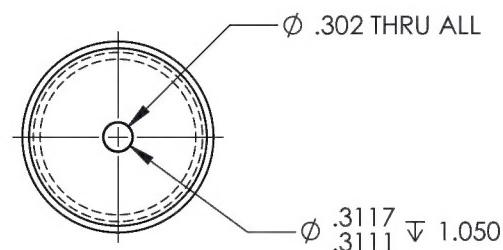
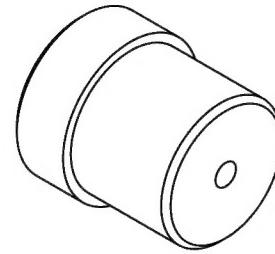
(-7)

WELDMENT

DART AEROSPACE	
TITLE	
DWG NO. RB T101743-125-7 REV 1	
MAT'L	DRAWN BY: GILBERT APPROVED D Weil
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
X ± .1	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SPEC QQ-P-416F, TYPE II, CLASS II USED ON MODEL	
HEAT TREAT FINISH CAD PLATE YELLOW	
SPEC QQ-P-416F, TYPE II, CLASS II USED ON MODEL	
BELL 412HP	
SCALE 1:2	DATE 7/18/2012
SHEET 5 OF 8	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR		DESCRIPTION	DATE	INITIAL
1	14-0233	-9	CH'D DIM WAS LIMITS Ø1.7618-1.7624 IS LIMITS Ø1.7610-1.7615.	1/8/2015	DPD JAG



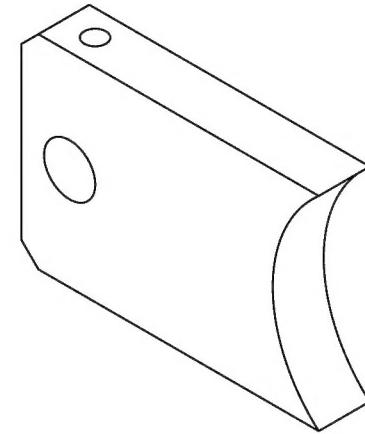
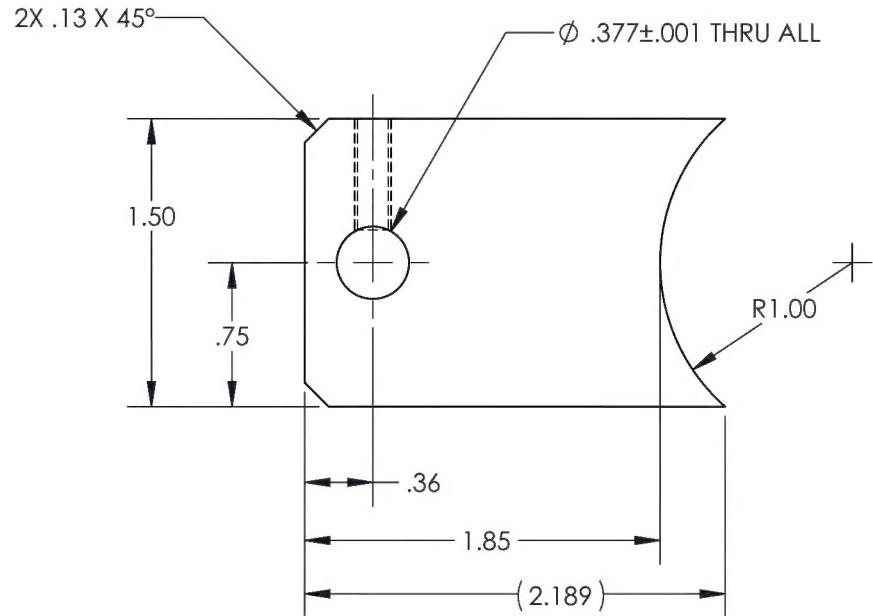
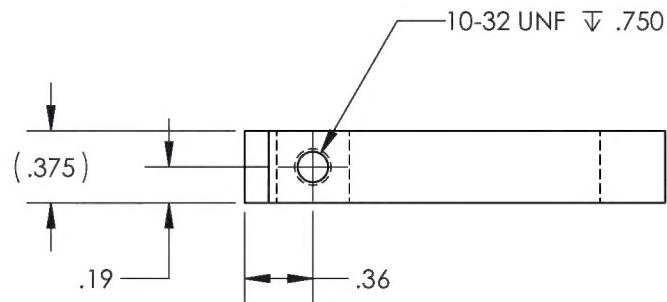
(-9)

INSERT 2

<b>DART</b> AEROSPACE	
TITLE	
DWG NO. RB T101743-125-9	
MAT'L 1018	DRAWN BY: GILBERT APPROVED <i>D Weil</i>
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
X ± .1	
HEAT TREAT FINISH SEE -7 WELDMENT	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SPEC USED ON MODEL	
BELL 412HP	
SCALE 1:2	DATE 7/18/2012
SHEET 6 OF 8	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REV	ECR	REVISIONS	DESCRIPTION	DATE	INITIAL	APPROVED
-----	-----	-----------	-------------	------	---------	----------



(-11)

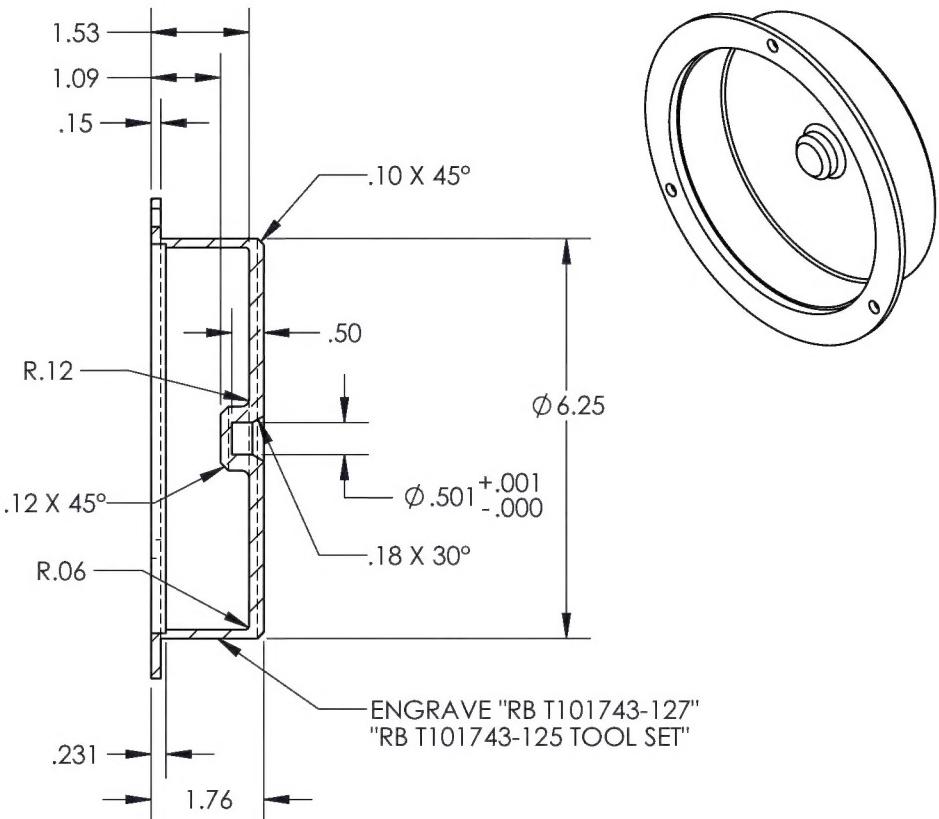
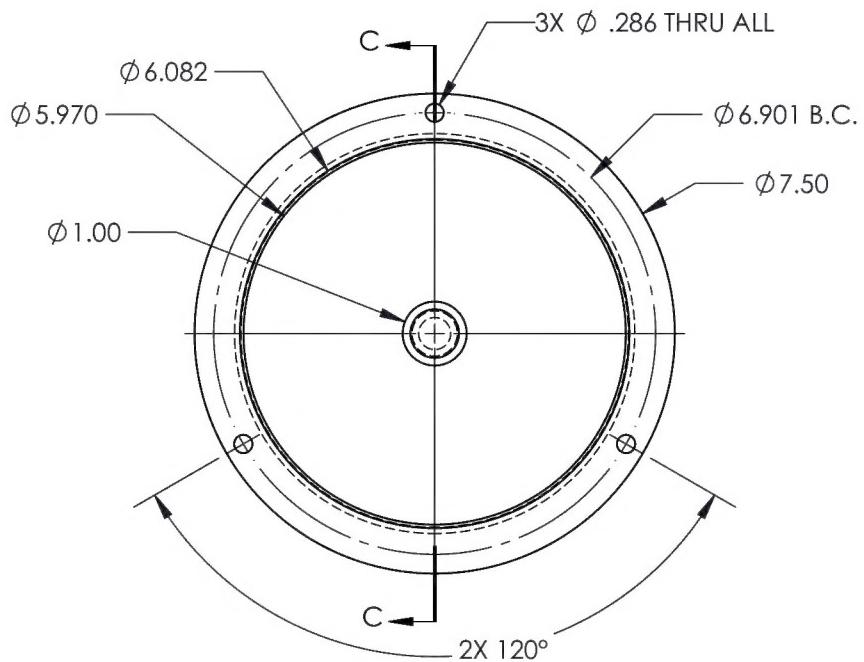
PLATE

DART AEROSPACE	
TITLE	
DWG NO. RB T101743-125-11	
MAT'L 1018	DRAWN BY: GILBERT
UNLESS OTHERWISE SPECIFIED APPROVED <i>D Weil</i>	
DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
.X ± .1	
HEAT TREAT SEE -7 WELDMENT	
1. BREAK ALL SHARP EDGES .015 x 45°	
OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER	
PLATING	
SPEC	
USED ON MODEL	
BELL 412HP	
SCALE 1:1	DATE 7/18/2012
SHEET 7 OF 8	

REV  
**1**

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
-----	-----	-------------	------	---------	----------



SECTION C-C

**DART**  
AEROSPACE

**D/S ALIGNMENT TOOL**

DWG NO.	RB T101743-125-13	REV <b>1</b>
MAT'L	4140/4142	DRAWN BY: GILBERT
		APPROVED <b>D Weil</b>
	UNLESS OTHERWISE SPECIFIED	FRACTIONS $\pm 1/8$
	DIMENSIONS ARE IN INCHES	ANGLES $\pm 5^\circ$
	.XXX $\pm .005$	HEAT TREAT
	.XX $\pm .01$	FINISH CAD PLATE YELLOW
	.X $\pm .1$	SPEC QQ-P-416F, TYPE II, CLASS II
	1. BREAK ALL SHARP EDGES .015 X 45° OR .015R	USED ON MODEL
	2. DIMENSIONAL LIMITS APPLY AFTER PLATING	BELL 429HP
SCALE	1:3	DATE 7/19/2012
		SHEET 8 OF 8